

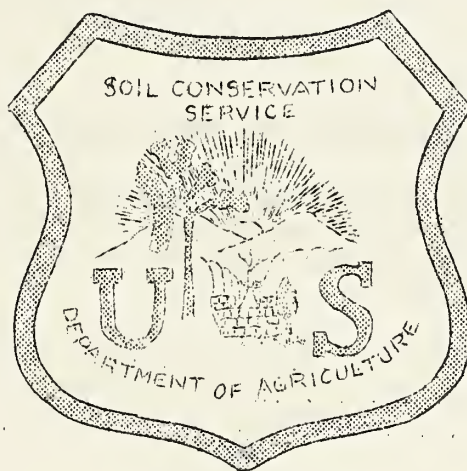
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DAKOTA ZEPHYR

JANUARY - FEBRUARY 1936

VOL. 2 NUMBER 1



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Region 9
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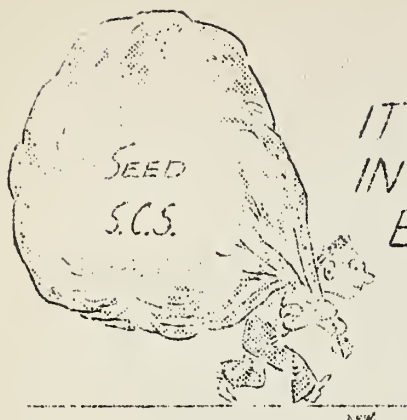
SOUTH DAKOTA

PROJECT NO. 1
PROJECT NO. 2

HURON, S. D.
WINNER, S. D.

REGION NO. 9

ANNOUNCEMENTS



SEEDS READY FOR DISTRIBUTION

The season's supply of seeds to be distributed by the Soil Conservation Service to cooperators under the terms of their agreements is now on hand. The supply includes alfalfa seed, sweet clover seed, and grass seeds.

The distribution of seeds to cooperators will begin as soon as the roads are open.

-----O-----

BEST DATES FOR SPRING SEEDINGS

According to the results obtained by the Agronomy Department of South Dakota State College from investigations carried on for more than a dozen years the best dates for spring seedings are, as an average,

Spring Wheat . . . March 15; Durum Wheat . . April 15.
Barley April 15; Flax April 15.
Oats April 1 to May 1.

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NEWS LETTERS

One news letter for each state is to be published. The letter will serve all the projects in the state.

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The Regional Office now established in Rapid City, S. Dak., will serve four states: North Dakota, South Dakota, Montana, and Wyoming. The work on South Dakota demonstration projects will continue without interruption under the direction of A. D. Ellison, State Coordinator.

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RADIO

KGDY, Huron, South Dakota

On Thursday's at 2:00 P. M. talks on soil conservation subjects will be given by members of the staff and others.

KFDY, State College, Brookings, S. D.

The Soil Conservation Service is cooperating with the Extension Service of State College which operates radio station KFDY from 12:30 to 2:00 P. M. each week day.

Listen to programs from these stations

THE DAKOTA ZEPHYR

Published for the Benefit of Soil Conservation Cooperators
By the Staff of the Soil Conservation Service

United States Department of Agriculture

Huron, South Dakota

H. J. Clemmer, Regional Conservator

A. D. Ellison, State Coordinator

Editor: J. G. Hutton

Contributors: Members of the Staff

Volume 2.

January-February 1936

Number 1.

Greetings, Cooperators! It was thought best to combine the January and February issues of the "Zephyr", but there is now some doubt as to the wisdom of this decision as several of those whose names are on the mailing list have been asking if the "Zephyr" has been discontinued.

Be assured that the publication of the "Zephyr" will be continued as a means of bringing to you helpful seasonable information concerning the soil conservation program. It will be to your interest to save all the issues as they can not be replaced. The delay in mailing the January-February issue is due to incidents connected with the moving of the regional office to Rapid City, S. Dakota.

-----O-----

Severe dust storms are being reported from points in the Southwest and such conditions may again prevail in South Dakota areas when the snow melts and exposes unprotected soil. If the soil begins to blow the Soil Conservation staff in your area should be consulted at once. "An ounce of prevention is worth a pound of cure" and the control of drifting soil before it covers fences, highways, and buildings is always a profitable procedure.

-----O-----

In the United States today more than 12,000 farmers, representing more than a million and a half acres of land, are voluntarily cooperating in the demonstration areas. In addition some 13,000 more farmers have said that they want to work out soil conservation programs in their communities. Several voluntary soil conservation associations have already been formed in South Dakota for this very purpose.

Thousands of farmers in the United States have inspected the control work on the demonstration areas during the last two years and have put many of the control methods into practice on their own farms. A number of groups of South Dakota farmers and land owners residing outside the demonstration areas have visited the projects to learn the methods of erosion control.

-----O-----

Soil conservation is the first line of national defense.

J. G. H.

COOPERATIVE RELATIONSHIPS

For the purpose of coordinating the activities of the Soil Conservation Service insofar as soil and water conservation and range management are concerned, full cooperation should be given all State and Federal agencies in an effort to obtain the desired results. Such agencies as the State Agricultural Colleges, State and Federal Agricultural Experiment Stations, the Extension Services, the State Planning Board and the State Department of Agriculture have at their disposal a vast amount of basic information that is fundamental in developing a sound and economic erosion control program.

State development associations, game and water conservation associations, bankers' associations, forestry departments, county commissioners, county planning boards, and others are in a position to be of valuable assistance in developing workable practices with respect to soil and water conservation.

Further recommendations include cooperation with the Federal Land Policy Section, the Forest Service, the State Relief Administration, and the Resettlement Administration, rendering of assistance wherever practicable and feasible to the Voluntary Soil Conservation Associations.

The State Soil Conservation Advisory Committee will assist in formulating programs for all soil conservation work in the state, in coordinating the various agencies concerned with soil conservation, and in contributing to a unified plan of action.

The Soil Conservation Service is the Federal agency primarily responsible for the control of soil erosion and in South Dakota every possible effort is being made to secure the cooperation of all other Federal and State agencies in working out a comprehensive soil conservation program.

All such agencies have valuable contributions to make a soil conservation program more workable and practicable, to speed up the progress of the work and to avoid unnecessary duplication of effort and expense.

A. D. Ellison
State Coordinator.

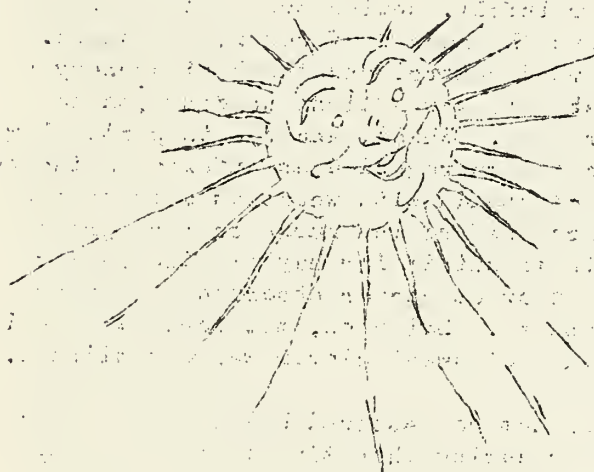


WINTER CAN'T

STAY WITH US

ALL THE TIME

BUT



HE WILL BE BACK NEXT YEAR!

NOW IS THE TIME TO PLAN FOR

THAT RESERVE FEED SUPPLY.

THE U.S. DEPARTMENT OF AGRICULTURE HAS A PLAN FOR YOU. IT'S THE "WINTER FEED RESERVE" PLAN. IT'S A PLAN THAT WILL HELP YOU KEEP YOUR FEED SUPPLY ON HAND THROUGH THE WINTER MONTHS. IT'S A PLAN THAT WILL HELP YOU SAVE MONEY AND KEEP YOUR FEED SUPPLY ON HAND THROUGH THE WINTER MONTHS. IT'S A PLAN THAT WILL HELP YOU SAVE MONEY AND KEEP YOUR FEED SUPPLY ON HAND THROUGH THE WINTER MONTHS.

SWEET CLOVER

Sweet clover is particularly well suited for pasture and for soil improvement. Seeded in established or new pastures, it has been found very beneficial in other respects besides its value as a pasture. Its ramifying roots open up the soil and subsoil, thus improving the conditions for the percolation of water and the circulation of air in the soil, and preventing a sod-bound condition of the grass roots. Sweet clover is a legume and by the aid of nitrogen fixing bacteria growing on its roots nitrogen from the air is added to the soil for the use of other pasture plants.

It is necessary that sweet clover be sown on a well firm-seeded seed bed. The seed is small and therefore must not be covered too deeply. A firm soil is necessary in order that the soil moisture may come into close contact with the seed.

In regions of low rainfall, sowing sweet clover with a nurse crop generally increases the hazard of securing a stand. However, for the purpose of weed control and the best economy of the land, it is often advisable to sow a light seeding (three pecks per acre) of barley or oats. Wheat, and rye in particular, as nurse crops for sweet clover are regarded as inferior although some farmers have secured good stands with wheat as a nurse crop. If soil moisture becomes scarce before the nurse crop of grain is harvested, it is advisable to cut it for hay or else pasture it. One of the best stands of sweet clover observed last year was sown in a small grain pasture. Later on, the weeds were clipped and by fall a thrifty stand of sweet clover was established.

Sweet clover should not be pastured heavily during the fall of the first year. It is during this time that the young plants are storing a food supply in the roots in order to maintain themselves over winter and to start growth the next spring. Heavy pasturing in the fall interferes with this process and greatly increases the hazard of winter killing.

To obtain the maximum benefit from a sweet clover crop, it should be allowed to grow the entire season of the second year. Early spring pasture is thus afforded as well as pasture throughout the summer. If not pastured, a hay or seed crop, or both, may be cut with the possibility of additional pasturage in the fall.

If the sweet clover crop is not allowed to grow the second year, it may be turned under in time for planting corn. Some farmers do not consider this a good practice because generally the sweet clover has taken too much of the soil moisture by the time that it is turned under so that there is not sufficient moisture left for the succeeding crop. When this occurs, sweet clover itself is blamed for the low yield of the following grain crop when, in reality, the lack of moisture is the cause. Where the rainfall is not too scanty farmers have followed the practice of spring plowing of second year sweet clover with success.

Scott C. McMichael, Jr. Agronomist.

FACTS AND FARMING

An economic survey of 39 farms in the Wolsey and Shue Creek Areas was made during January, 1936, disclosing the facts that the acreage size of these farms is 372 acres of which 253 acres were crop land, 107 acres in pasture, and 12 acres in farmsteads, roads, and wasteland in 1935.

Corn was grown on 28 farms, wheat on 33, oats on 27, barley on 28, rye on 18, flax on 10, and alfalfa on 3 farms. Dairy products appeared on 25 farms, poultry on 30, and hogs on 10.

Crop conditions were very adverse during the growing season of 1935 and the value of the crop produced per acre was far below normal. Wheat led in returns per acre at \$5.45, followed by rye \$4.31, flax \$3.90, barley \$3.97, corn \$2.16, and alfalfa \$1.93.

County Agent L. L. Ladd is cooperating with the Soil Conservation Service in making this survey and reports will be mailed out soon. The report will enable cooperators to compare their farm business with that of the 39 farms already surveyed. Many Farm Record Books for 1936 have been distributed and all cooperators are urged to keep the records up-to-date and in good shape. At the end of the year, assistance will be given in summarizing and analyzing the records and in applying the results to the farming business of 1937.

Of the livestock enterprises based on the returns per dollar invested, hogs gave the highest returns. For every \$1.00 invested in hogs, a gross return of \$3.67 was secured. This means that this \$3.67 must cover the feed costs, labor costs, all miscellaneous expenses on every dollar's worth of hogs kept on these farms before any profit could be claimed. Poultry gave the next highest return per dollar invested. There was an average of \$122.00 worth of poultry and eggs sold from each farm, calculated on basis of the number of birds we have a gross return of \$1.71 per head and for every dollar invested in poultry, the gross return was \$3.07. From these amounts, \$1.71 return per head and \$3.07 per dollar, must be taken feed costs, labor costs, and miscellaneous expenses before any profit accrues. Feed costs have been found to be about \$1.15 to \$1.25 per bird per year. Labor costs vary. About 100 to 350 hours per are needed to care for a flock of 100 head.

The crop rotations suggested by the Soil Conservation Service include plans for controlling soil erosion and also the production of feed and grain crops for use in making the farm a well-balanced, economically-sound producing unit.

I. N. Chapman

Senior Soil Conservationist.

FORESTRY

Windbreaks and shelterbelts should be an essential part of every farm which is located on the open prairie or great plains. Many farmers are so anxious to devote every square rod of tillable land to crop production or pasture for their livestock, that they overlook or ignore the many advantages of tree and shrub plantings and, in many cases, begrudge them the land which they occupy.

Some of the benefits derived from windbreaks and shelterbelt plantings are: Protection from the hot, drying winds of summer; protection from the cold winds of winter; production of fuel, fence posts, repair and construction timber; an increased sale value for the farm; and in general, protection to man, livestock, orchards, gardens, and field crops. The saving of fuel and feed are also important considerations.

The benefits derived from a good shelterbelt about the farmstead site are not always fully appreciated, but livestock farmers realize that windbreaks are of great value to animals in winter. Livestock that can enjoy fresh air every day in the shelter of a good windbreak will be in far better condition in the spring than livestock which has been confined to the barn all winter or exposed to the cold winds when turned outside.

Although protection afforded by tree plantings during the winter is of major importance, the benefits derived during the summer months should not be overlooked. Crops in the immediate vicinity of the tree plantings will necessarily be reduced due to competition for soil moisture and, perhaps, sunlight. However, both experiments and observations have shown that increased yields are obtained to the leeward of the windbreaks, that the influence is noticeable up to a distance of 15 to 20 times the height of the windbreak and that the lodging of grain, especially corn, is reduced.

The benefits are confined not only to the winter and summer months, but are also noticeable during the spring and fall. The greatest damage from wind erosion occurs during the spring or fall when the ground is not covered either with snow or crop plants. The blowing of the soil is materially lessened to the leeward of effective windbreaks.

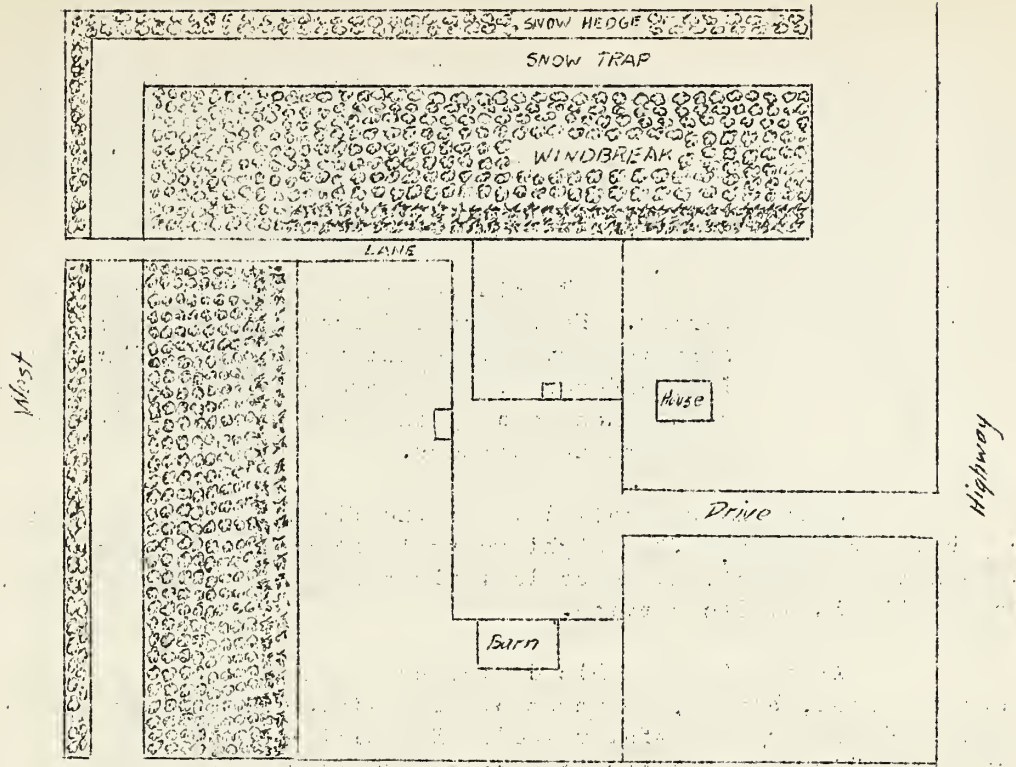
With all of these benefits in mind, cooperators in soil conservation programs are being encouraged to establish windbreaks and shelterbelts, not only about the farmstead site, but also across cultivated fields.

P. L. Keene,

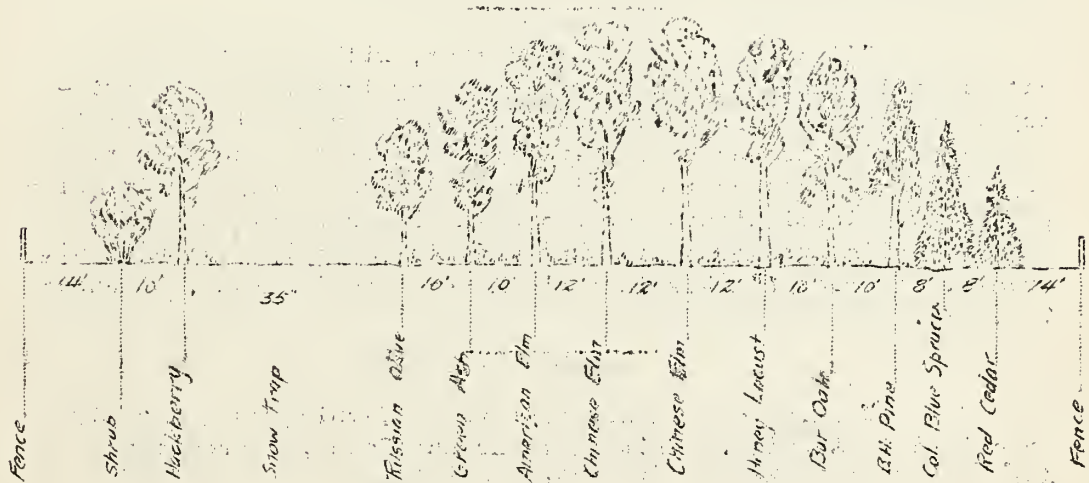
Associate Forester.

FARMSTEAD WINDBREAK

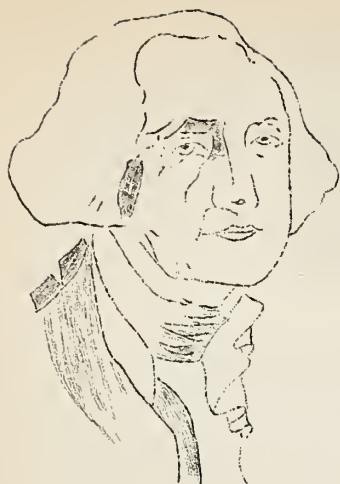
North



Ground Plan



Cross Section



GEORGE WASHINGTON

FARMER, PATRIOT, STATESMAN, FARMER

Washington was, first and last, a farmer. He was called from his Mt. Vernon farm to serve his country during the War for Independence at the close of which he returned to his home and again took up the problems of his farming business.

Again he was called to be the first President of the Republic, returning after eight years to be again a farmer. As a matter of fact, he never lost his connection with his farm, even while in public service.

At the time of his death, he was the owner of 50,975 acres of land, but 40,000 acres of his estate consisted of "western land of very doubtful value". His will showed that he possessed "329 head of horned cattle, 640 sheep, and a large stock of hogs, number unknown, together with 101 horses and mules, which he valued at \$15,653.

Washington used a good crop rotation on his farm. It was a seven year rotation; "corn and potatoes; clover or grass; clover or grass; clover or grass; wheat; buckwheat for manure; and wheat." He purchased the best varieties and quality of seeds, importing many of them from England.

-----O-----

"It will not be doubted that, with reference to either individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population and other circumstances of maturity, this truth becomes more apparent, and renders the soil more and more an object of public patronage. Institutions for promoting it grow up, supported by the public purse; and to what object can it be dedicated with greater propriety?" (Washington's Message to Congress, December 7, 1796).

-----O-----

Washington did not approve of farming as generally practiced in America. Writing to Arthur Young, a prominent Agriculturist in England in 1791, he said:

"The aim of the farmers in this country (if they can be called farmers) is not to make the most they can from the land which is or has been cheap, but the most of the labor which is dear, the consequence of which has been - much ground has been scratched over and none cultivated or improved as it ought to have been; whereas, a farmer in England, where land is dear and labor cheap, finds it to his interest to improve and cultivate highly that he may reap large crops from a small quantity of ground."

Washington was the first soil conservationist. He recognized the importance of the soil in national existence, the ruinous effects on the soil of agriculture as generally practiced, and the responsibility of the Government in conserving it. He recognized long ago the fact that the nation's life-blood springs from out the soil.

J. G. H.

WHAT ONE FARMER THINKS

(From the Evening Huronite, February 14, 1936)

To The Editor:

Those of us who saw the three inch rain which fell in the space of two hours in July, 1934, run off through the ravines and highway ditches, thought such loss of water was of rare occurrence. It now appears that 50 to 75% of the moisture in the snow will run off the frozen ground when the snow melts.

This loss of water can be prevented. The system of terracing used on the soil erosion project in the north-eastern part of Beadle County will effectually prevent this runoff. The crops raised on these terraced farms will be watched with interest.

A Farmer.

Cavour, S. Dak.

TILLAGE AND EROSION CONTROL

"When the soil is bare any kind of tillage, which will roughen the surface, gives a temporary protection from erosion. Two general objectives may be set up in considering this phase of erosion prevention, namely: ridging or clodding the surface soil and raising heavy sub-soil material to the surface.

"Among the implements which have been used for the first mentioned purpose are lister, shovel or sweep cultivator, the one-way disc with each second or third disc left on, the deep furrow drill, the spike tooth harrow, plow, and pocket digger. Implements which have been used for the latter named purpose are the chisel, sub-soil plow, moldboard plow, lister, the disc plow, and grading machine.

"The clodding effect of shallow tillage, especially on sandy loam soil, can often be increased by doing the job while the soil is wet. The object of raising heavier soil material from the sub-surface is to produce a more cloddy structure where the surface soil has become shifty. Operations of this character, though costly, may under certain conditions do permanent good, but they should be considered more as a temporary substitute for the desired vegetative cover. Organic matter in the surface soil serves the same purpose and possesses, also, certain other advantages to costing less. The most important advantages of vegetative control, as compared to mechanical control, are that vegetative covering renewed once a year gives more lasting protection and that it is important from the standpoint of maintaining soil fertility and keeping up the rate of moisture absorption to a high point.

"Tillage methods at best afford only temporary relief and must be repeated at intervals during the season, all of which is done at an expense which is usually unproductive. In no case should tillage operations for erosion control be continued after an opportunity arises to start either a regular crop or an emergency cover crop. It is not intended to minimize the importance of soil mechanics but to point out the waste of relying unnecessarily on such methods. They should be used diligently when all other measures have failed, serving as a fourth line of defense against wind erosion.

"Where erosion prevention tillage can be combined with necessary soil preparation or moisture saving practices the usefulness of the operation is much increased. In this connection, it is needless to say that any tillage operations of soil requiring contour treatment should, for the best moisture utilization, always be carried out on the contour."

Quoted from Article by H. H. Finnell
Regional Conservator
Region #6
Amarillo, Texas.

E.C.W. CAMPS

During the spring of 1935, the Soil Conservation Service was allotted three C. C. C. Camps for soil erosion control and water conservation work in South Dakota.

Camp S. C. S. - 1 was located on Crow Creek, 15 miles north of Chamberlain, South Dakota, and started construction of a large earth dam on Crow Creek about June 1st. This dam had been started in 1934 by the United States Forest Service.

Camp S. C. S. - 2 was established at Presho in Lyman County, South Dakota, to complete the construction of two earth dams started in 1934 by the Forest Service. Construction work was started about June 15 and was continued until October 15th, when the tent camp was disbanded because of cold weather.

Camp S. C. S. - 3 was located at Alcester in Union County, South Dakota. This camp is engaged almost entirely in soil erosion control work.

About October 15th, a North Dakota Soil Conservation camp located at Valley City, North Dakota, was transferred to winter quarters at Huron, South Dakota as Camp S. C. S. - 4. This camp is constructing a rubble masonry dam across the James river in the city limits of Huron, South Dakota. Thirty enrollees and two foremen from this camp are completing construction of a reinforced concrete spillway at the Hussman dam in Lyman county constructed by S. C. S. - 3.

Lowell A. Yost
Acting State Administrator, E.C.W.

SEED FOR ERODED LANDS

The Soil Conservation Service has collected approximately 2,300,000 pounds of tree and shrub seed and 700,000 pounds of grass seed. The grass seed, together with acorns, walnuts, and hickory nuts, will be planted on demonstration areas. Most of the tree seed will be used for nursery planting. Restoration of vegetation to acres damaged by erosion is one of the surest ways to check further soil losses.

WINNER-DIXON AREA

SCS, S.D. NO. 2

L. M. Sloan, Project Manager, at Winner, S. Dak. writes:

"Winter has clamped down on field work in the Winner-Dixon area. Roads are blocked, and even the contact men have not been able to get in the country for weeks. We are anticipating trouble in the spring from muddy roads. We have about thirty inches of snow on the level, and long deep drifts bar travel on the roads.

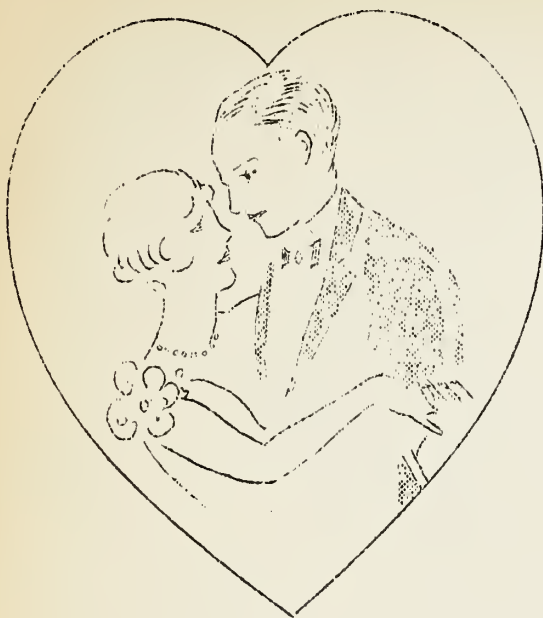
However, we have been receiving a few signed agreements, policies have been worked out, and program planning has been furthered by our confinement to office work. Motor equipment has arrived and with the break of spring, we will be ready to attack the work with the expectation of really accomplishing something.

Following is a list of cooperators secured since the last list which was published in the "Winner Whirlwind."

J. S. Meyers -- T	SE $\frac{1}{4}$ -18-99-73
L. P. Brewster --O	
O. N. Olson --O	SE $\frac{1}{4}$ -19-99-73
O. N. Olson --O	SW $\frac{1}{4}$ -20-99-73
Tom Petry --T	SW $\frac{1}{4}$ - 2-99-74
Mrs. Anna Petry --O	
Tom Petry --O	SE $\frac{1}{4}$ - 9-99-74
Tom Petry --O	NW $\frac{1}{4}$ -10-99-74
Tom Petry --T	NE $\frac{1}{4}$ -10-99-74
Carl Pearson --O	
Tom Petry --T	N $\frac{1}{2}$ -11-99-74
Mrs. Anna Petry --O	
Wm. Connot --T	NW $\frac{1}{4}$ -19-99-74
Julia Stone --O	
Axel Johnson --T	N $\frac{1}{2}$ N $\frac{1}{2}$ - 8-99-75
Ida Anderson --O	
A. P. Hansen --T	SW $\frac{1}{4}$ -8-99-75
Guy Poole --O	
Axel Johnson --T	NW $\frac{1}{4}$ -9-99-75
Ida Anderson --O	
Noble Aitken --T	NW $\frac{1}{4}$ -11-99-75
Miss Clara Moore --O	
Axel Johnson --T	N $\frac{1}{2}$ N $\frac{1}{2}$ -15-99-75
Alfred Nelson --O	
B. F. Carper --T	S $\frac{1}{2}$ N $\frac{1}{2}$ -15-99-75
Mrs. Ethel Kraft --O	
A. P. Hansen --O	W $\frac{1}{2}$ -17-99-75
A. F. Ehrlich --T	SE $\frac{1}{4}$ -27-99-75
Edward Anthony --O	
Edmund Heying --T	E $\frac{1}{2}$ -33-100-76
Wm. Butterfield --O	
J. K. Frescoln --O	N $\frac{1}{2}$ -34-100-76
	SW $\frac{1}{4}$ -34-100-76

O = Owner

T= Tenant



TAKE CARE OF THE SOIL
WHILE YOU ARE YOUNG

AND

THE SOIL WILL
TAKE CARE OF YOU
WHEN YOU ARE OLD



We are all young once, but in the course of human events we all grow old. Blessed are they who in their declining years own a productive farm to support them and to insure economic security for those who follow them. Save the soil.

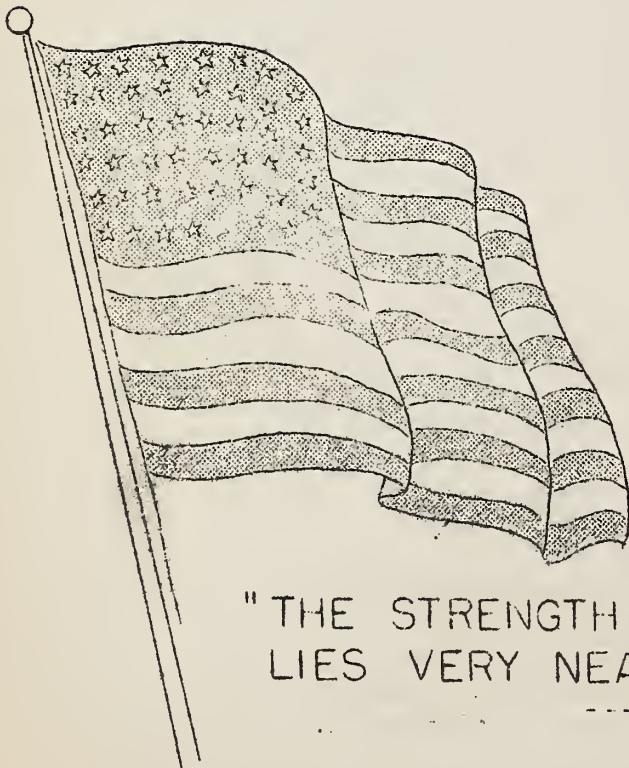
J. G. H.

UNITED STATES
Department of Agriculture
Soil Conservation Service

H. J. Clemmer, Regional Conservator
Huron, South Dakota

Penalty for private use to
avoid payment of postage, \$300.

Official Business



"THE STRENGTH OF THE NATION
LIES VERY NEAR THE SOIL"

----- DANIEL WEBSTER